

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/SG 03/00071

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K35/78 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, EPO-Internal, PAJ, MEDLINE, BIOSIS, EMBASE, PASCAL, FSTA

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE WPI Section Ch, Week 200233 Derwent Publications Ltd., London, GB; Class B04, AN 2002-281903 XP002253121 &amp; CN 1 333 046 A (YANG C), 30 January 2002 (2002-01-30) abstract</p>	67
Y	<p>---</p> <p>-/--</p>	1-17, 19, 68-70

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

13 February 2004

Date of mailing of the international search report

05.03.2004

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE WPI  Section Ch, Week 200233  Derwent Publications Ltd., London, GB;  Class B04, AN 2002-281902  XP002253122  &amp; CN 1 333 045 A (YANG C),  30 January 2002 (2002-01-30)  abstract</p>	67
Y	---	68
Y	<p>PATENT ABSTRACTS OF JAPAN  vol. 013, no. 556 (C-664),  11 December 1989 (1989-12-11)  &amp; JP 01 230525 A (NITTO DENKO CORP),  14 September 1989 (1989-09-14)  abstract</p>	1-17, 19, 68-70
Y	<p>EP 0 665 017 A (HENNE KURT)  2 August 1995 (1995-08-02)  the whole document</p>	1-17, 19, 68-70
Y	<p>DATABASE WPI  Section Ch, Week 199713  Derwent Publications Ltd., London, GB;  Class B04, AN 1997-133212  XP002253123  &amp; CN 1 089 846 A (JIANGXI COLLEGE  TRADITIONAL CHINESE),  27 July 1994 (1994-07-27)  abstract</p>	68
Y	<p>US 4 469 685 A (KOJIMA YASUHIKO ET AL)  4 September 1984 (1984-09-04)  page 1, line 20  claims</p>	70
Y	<p>LAWRENCE BRIAN M: "Progress in essential  oils."  PERFUMER &amp; FLAVORIST,  vol. 17, no. 6, 1992, pages 51-60,  XP009011568  ISSN: 0272-2666  page 59</p>	14-17, 19
Y	<p>LI R ET AL: "Effects of seven alkaloids  of Sophora alopecuroides on contractility  of papillary muscles of guinea pigs"  ACTA PHARMACOLOGICA SINICA 1986 CHINA,  vol. 7, no. 3, 1986, pages 219-221,  XP009011616  page 221</p>	14-17
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>RAO B R RAJESWARA: "Rose-scented geranium (Pelargonium species): Indian and international perspective." JOURNAL OF MEDICINAL AND AROMATIC PLANT SCIENCES, vol. 22, no. 1B, March 2000 (2000-03), pages 302-312, XP009011610 page 302, right-hand column</p> <p>---</p>	11,12
Y	<p>MALLAVARAPU GOPAL R ET AL: "Contribution of the essential oils of leaf, petiole and stem of scented geranium to the odour of geranium oil." JOURNAL OF MEDICINAL AND AROMATIC PLANT SCIENCES, vol. 19, no. 4, December 1997 (1997-12), pages 1020-1023, XP009011611 table 1</p> <p>---</p>	14-17
Y	<p>SUN H ET AL: "THE CHEMICAL CONSTITUENTS OF GERANIUM OIL" ACTA BOTANICA YUNNANICA, vol. 7, no. 2, 1985, pages 233-237, XP001152623 ISSN: 0253-2700 page 237</p> <p>---</p>	14-17
Y	<p>HIRAYAMA F ET AL: "Determination of lupin alkaloids and pterocarpanes in sophora root by HPLC" NATURAL MEDICINES 1995 JAPAN, vol. 49, no. 3, 1995, pages 317-321, XP009011617 ISSN: 1340-3443 the whole document</p> <p>---</p>	14-17
Y	<p>LIS-BALCHIN M ET AL: "Studies on the mode of action of essential oils of scented-leaf Pelargonium (Geraniaceae)" PHYTOTHERAPY RESEARCH 1998 UNITED KINGDOM, vol. 12, no. 3, 1998, pages 215-217, XP009011731 ISSN: 0951-418X table 1</p> <p>---</p>	14-17
X	<p>DATABASE WPI Section Ch, Week 200205 Derwent Publications Ltd., London, GB; Class D22, AN 2002-035010 XP002270194 &amp; CN 1 311 038 A (ZHAO Z), 5 September 2001 (2001-09-05) abstract</p> <p>---</p> <p style="text-align: center;">-/--</p>	18

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 372 239 B1 (WU CHANG-AN ET AL)	18
A	16 April 2002 (2002-04-16) the whole document claim 1 -----	14-17, 19

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International application No.  
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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 20-66, 71-72  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
2. ☒ Claims Nos.: 18  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☒ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-17, 19 (part), 20, 21 (part), 22-70, 71 (part), 72 (part)

Compositions comprising geranium oil and extractions from the root of Sophora plants such as *S. tonkinesis* (*S. subprostrata*), *S. alopecuroides*, *S. moorcroftiana* etc., and compositions comprising purified components of geranium oil and/or of extractions from the root of *Sophora tonkinesis*, e.g. comprsg. citronellol, geraniol, geranyl formate, citronellyl formate, matrine and oxymatrine, and methods for administering said compositions comprsg. geranium oil and extractions from the root of *S. tonkinesis* to mammalian animals being treated or to be treated with said one or more cancer treatments.

2. Claims: 18, 21 (part), 71 (part), 72 (part)

Composition comprising A and B wherein A is selected from a group consisting of hexanol, 3-hexen-1-ol, alpha-pinene, beta-pinene, P-cymene, limonene, 1,8-cineol, ocimene, linallol oxide, linallol, trans-rose oxide, cis-rose oxide, citronellal, menthone, iso-methone, menthol, terpineol, citronellol, geraniol, citronellyl formate, geranyl formate, caryophellene, citronellyl propinoate, gurjunene, cadiene, and B is selected from a group consisting of matrine, oxymatrine, anagyrine, methylcytisine, cytosine, sophocarpine, sophocarpine N-oxide, sophoramine, sophoranol, sophoranone, sophoradin, sophoranochromene, sophoradochromene, pterocarpine, genistein, maackian, trifolirhizin, sitosterol, lu-peol and alkyl alcohol ester. and a method for administering such a composition for supporting cancer treatment.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210 .

Continuation of Box I.2

Claims Nos.: 18

Claim 18 relates to an extremely large number of possible combinations of compounds A and B. Therefore, a lack of clarity (and/or conciseness) within the meaning of Article 6 PCT and a lack of sufficient disclosure according to Article 5 PCT arises to such an extent as to render a meaningful search of the claims impossible. Consequently, the search has been limited to the combinations of all compounds listed in group A with the first mentioned compounds in group B, i.e. matrine and oxymatrine.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
CN 1333046	A	30-01-2002	NONE	
CN 1333045	A	30-01-2002	NONE	
JP 01230525	A	14-09-1989	NONE	
EP 0665017	A	02-08-1995	EP 0665017 A1	02-08-1995
CN 1089846	A	27-07-1994	NONE	
US 4469685	A	04-09-1984	JP 56079623 A	30-06-1981
			JP 56097232 A	05-08-1981
			DE 3067048 D1	19-04-1984
			DE 3070086 D1	14-03-1985
			EP 0030812 A2	24-06-1981
			EP 0030444 A2	17-06-1981
			US 4421746 A	20-12-1983
CN 1311038	A	05-09-2001	NONE	
US 6372239	B1	16-04-2002	CN 1306750 A	08-08-2001
			AU 3296801 A	20-08-2001